ANIA

'Orbiting Mailbox' Taps Sandia's Renewable Energy Expertise

People working on renewable energy projects in developing countries can now request technical assistance from Sandia without struggling with unreliable mail and telephone systems.

A new global communications network acts as an "orbiting mailbox," allowing users to exchange inquiries and information by computer. The system's linchpin is a satellite that intercepts, tem-



GLOBAL REACH — Jeff Zirzow (6219) marks a VITASAT ground station with a flag. Other flags and pins show locations of renewable energy projects that Sandia has participated in. The VITASAT system, sponsored by Volunteers in Technical Assistance, provides satellite communication between ground stations around the world. Sandia uses its station (one of two in the US) to assist renewable energy projects. (Photo by Mark Poulsen)

porarily stores, and transmits the information to any of the network's approximately dozen stations around the world.

The system, called VITASAT, provides a mechanism for communications and data exchange to areas where conventional telephone or radio communications are not available, are inadequate, or are too expensive.

Two Satellite Ground Stations in US

Sandia has one of only two VITASAT ground stations located in the United States — the other is in Arlington, Va. Other VITASAT stations can be found in such far-flung places as Djibouti, Indonesia, Sierra Leone, Ireland, Kenya, and Antarctica.

VITASAT's sponsoring organization, Volunteers in Technical Assistance (VITA), developed the system primarily for its potential to enhance programs in health, environment, education, energy, and disaster response in developing coun-

VITASAT works where telephone or radio communications are unavailable, inadequate, or too expensive.

tries. VITA is a private, nonprofit international development organization specializing in information dissemination and communications technology. For example, VITA has developed communication systems for monitoring renewable energy projects in Latin America and collecting and exchanging crop, water, and weather data among major African countries.

"Through this satellite link, Sandia is involved in a network that helps developing nations while (Continued on Page Four)

Sandia Has Won 22 Since 1976

Labs Researchers Honored with Four R&D 100 Awards

Sandia National Laboratories researchers participated in four winning entries in the 1992 R&D 100 competition, which recognizes the 100 most significant new technical products of 1992.

The awards, sponsored by R&D Magazine, were given to Sandia researchers for the following four projects:

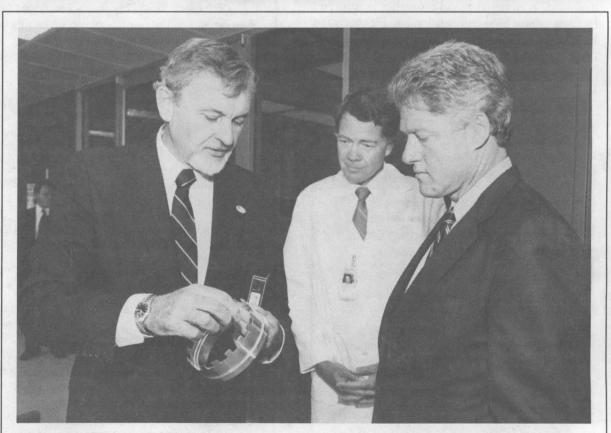
- · An automotive engine diagnostic tool that incorporates ionization probes in a head gasket for combustion analysis.
- A software package for modeling polymer alloys. The software was developed in collaboration with researchers at BIOSYM Technologies and the University of Illinois, co-winners of the award.
- A novel concept for helium self-pumping that could significantly reduce the size and complexity of the systems for vacuum pumping and tritium processing needed in future fusion reactors. The award was given jointly to researchers at Sandia and Argonne National Laboratory who collaborated on the project.
- · A system that uses sunlight to destroy organic toxins in ground water. This award was shared with the National Renewable Energy Laboratory (NREL).

The awards were presented at a Sept. 24 dinner in Chicago's Museum of Science & Industry. They bring to 22 the number of R&D 100 awards Sandia researchers have received since 1976.

Combustion Engine Design

The engine diagnostic instrument was developed by Peter Witze of Combustion Application Dept. 8362 in Sandia's Combustion Research (Continued on Page Four)

VOL. 44, NO. 20 SANDIA NATIONAL LABORATORIES **OCTOBER 2, 1992**



PRESIDENTIAL CANDIDATE Bill Clinton gets an explanation from Sandia President Al Narath of robotic edge finishing during a tour of the Microelectronics Development Lab Sept. 18. Al Jones, Manager of Intelligent Systems Dept. 1671, looks on as AI explains how a robot developed in Dept. 1671 is used in the manufacturing of high-precision parts such as jet engine turbine blades. The Arkansas governor was briefed on several projects displayed for him in the MDL before addressing Sandians. An article about Clinton's speech and some questions-and-answers appear on page six.

This & That

Our Political Week - No sooner had President Bush finished speaking at Sandia on Tuesday, Sept. 15, than rumors started that Bill Clinton would speak here Friday, Sept. 18. Because we only publish every two weeks, our coverage of Clinton's visit is two weeks old, but you can read it beginning on page six. We covered Bush's visit in the last issue. Reiterating the thought that we expressed then, it was nice to hear the candidates discuss issues that relate directly to Sandia and other R&D labs.

Baby Shower - or Deluge - Statistical question: What's the probability of babies being born within a little more than two months into the families of five Sandians in Org. 7000 who work in three adjoining temporary buildings? We don't know, but it happened this spring and summer. Nora Tankersley (7013) let us know about these births: To Eileen and Brad (7013) Wisler, a daughter, Tracy Ann, May 29; to Jan (7013) and Mike Williams, a son, Ryan Patrick, June 21; to Cynthia Figueroa-McInteer (7013) and Bob McInteer, a son, Levi John, July 11; to Kathryn and Tom (7946) Faturos, a son, Andrew Spencer, July 13; to Patty and Brad (7012) Skinner, a son, Gregory Lynn, Aug. 4.

Our Very Own Junk Mail - Do you detest "personalized" junk mail as much as I do - even more so than general junk mail? Messages such as "We are pleased to notify you, MR. LARRY G. PERRINE of 1111 POVERTY ROAD, that you have been specially selected to receive a 20 percent discount on prime Santa Fe beachfront property . . . blah, blah, blah" take phoniness to new heights - or maybe that should be new depths. If mailers insist on this type of thing, though, you'd think they'd at least use a little common sense. LAB NEWS Editorial Assistant Janet Carpenter recently got a junk-mail letter personally addressed to her on a letterhead, followed by the greeting "Dear Sirs:"

Wonder What He Did B-4? - Kids come up with some real gems. Tim Spears (9215) tells a story about accompanying his daughter's firstgrade class on a field trip several years ago. Tim started talking to the children about his work at Sandia. "My father works at Sandia, too," said one little girl. "Oh really," said Tim. "What does he do?" She replied that he "works with numbers." Some time later Tim discovered that the girl's father did indeed work with numbers at Sandia - at the Sandia Bingo hall where he drew bingo balls out of the hopper and called out the numbers.

Narath Urges ECP Support

To: All Employees

From: Al Narath

Subject: 1992 ECP Campaign

This year's ECP campaign will run from Oct. 5 to Oct. 9.

The needs, met by your contributions to the Greater Albuquerque United Way campaign, continue to grow. I believe it is important that we all continue to show a strong level of support for this activity, particularly in view of recent national events which may have hurt the image of the United Way of America and can be expected to impact the local campaign.

The United Way of America has emerged from this experience as a stronger, more accountable national organization with a highly qualified new president. Our local, autonomous United Way has benefited as well; it now places increased emphasis on getting the most from our dollars in Albuquerque and elsewhere.

We Sandians have a proud record of meeting our responsibilities to the community. Last year, we gave 21 percent of the total pledge for the four-county Greater United Way of Albuquerque area. The ECP Committee and I want you to know that your efforts are valued by the Labs and the community.

Your gifts do make a real difference!

Family Day Volunteers Needed

The Family Day '92 Committee needs about 25 volunteers for the 9 a.m. to noon Family Day, Saturday, Oct. 17. The volunteers are needed to handle short-notice demand for visitor escorts and to assist in providing information and identification badges at each of the gates, says Will Keener (7161), committee secretary.

To be a Family Day volunteer, or to ask questions about the event, call Will on 844-4207.



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SANDIA NATIONAL LABORATORIES

An Equal Opportunity Employer

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Message from the Union Presidents

To All Represented Sandia Employees:

ECP needs you! This year's Employee Contribution Plan campaign kickoff is Oct. 5. With your support and contributions, we can make this year's campaign one that Labor can be proud of.

Here are figures, provided by the Labs, on Employee Contribution Plan participation by members of the Metal Trades Council, Office & Professional Employees International Union, and International Guards Union of America.

	OPEIU	MTC	IGUA	Sandia Overall
Gold Share (1% of salary or more)	2.3%	2.0%	1.9%	5.4%
Fair Share (0.6%, but less than 1%)	20.2%	19.5%	23.4%	38.4%
Participant (less than 0.6%)	49.1%	51.6%	51.3%	39.6%
Not Participating	28%	26.9%	23.4%	16.6%

Sandia's contribution to the agencies funded by United Way of Greater Albuquerque last year topped \$1.5 million. Even at that, allocations to agencies often fall short. That means some people didn't get needed help.

This year, when your area representatives approach you with your ECP pledge card, remember those not as fortunate as we. You can make the difference! Increasing your contribution by just one dollar per week will help many more receive the help they need.

We would like to thank all who contribute to ECP and encourage non-contributors to join those of us who are helping our community. If you have any questions, contact your ECP representatives: Tim Ashby (OPEIU), 4-8792; Ernest Aguilar (MTC), 4-3255; Constance Koch (IGUA), 4-4657.

Remember, Brothers and Sisters, "ECP Needs You."

Duane Carr, IGUA President Conrado Otero, MTC President William McLendon, OPEIU President

Through LEAP, Sandians Help People in Tough Times

The Livermore Employees Assistance Plan (LEAP) campaign has a different look this year, offering informational briefings during regular Center meetings and introducing ways for Sandians to contribute time or skills. The theme "Choose to Make a Difference" summarizes the focus of the campaign, says chairman Mark Perra (8714).

"We want Sandians to understand how much impact they can have as individuals by making the



choice to put aside some of their own needs to be able to give to others who are so very much more in need," says Mark.

"In these tough economic times, many Sandians and their families are themselves feeling the pinch in their pocketbooks and may feel less inclined to give. But we also are aware as Californians that we're experiencing a precipitous decline in public funding for all kinds of community services. This decline greatly increases demand on the very agencies that we support. There are thousands of needs now going unmet for meals, housing, and medical care among elderly, homeless, families, and children in the communities where Sandians live. So Sandians' participation is more important than ever before."

The contribution form has been redesigned this year to provide a much wider variety of choices for contributors, Mark says. "Employees can still leave it up to the LEAP Committee to distribute their donations among some 30 local and East Bay human service agencies by checking that box on



scene of a recent visit by several members of the LEAP Committee. Kaleidoscope serves developmentally disabled children and their families who live in the Tri-Valley area communities. Kaleidoscope director Mike Huckins (right) gives an overview about the facility to (back row, from left) Chris Welcher (8271), Shelia Daigle-Beaird (8641), Cheryl Lawrence (8714), (front) Dave Chandler (8353), and Glenda Mohrman (8453),

KALEIDOSCOPE Activity

Center in Dublin was the

the form, or they can select other "umbrella" organizations: the Tri-Valley Community Fund, the United Way, or Combined Health Appeal." An employee with a special interest in his or her own community may designate favorite agencies to receive those funds.

No 'Faire' This Year

The LEAP Committee plans to provide short briefings during Center meetings early in October. Community leaders from the Tri-Valley Community Fund will be at the meetings to discuss community needs and explain how the fund operates. Before the Center meetings, employees will receive sample contribution forms at home so they can discuss their choices with their families. After the meetings, campaign contribution materials will

be distributed personally to each Sandian by department LEAP representatives so that employees can mark their contribution cards.

"We've decided not to put together another LEAP Faire during a period when Sandians are experiencing heavy workloads, a Family Day, and dedication of the Integrated Manufacturing Technologies Laboratory," Mark says.

Nor will there be separate solicitation meetings for each Center; instead, the LEAP presentations will be part of regularly scheduled Center meetings.

Presenting Volunteer Opportunities

"In addition to contributing funds, we're introducing the concept of contributing time and skills into the campaign this year," Mark adds. "Employees will hear about this during the Center presentations. We'll offer another new way for Sandians to work with the community by providing opportunities for crews of Sandia volunteers to gather in the evening or on a Saturday for a special work project — for example, assembling playground equipment at the Family Crisis Center's homeless shelter." (See "Sandians Volunteer Efforts to Help Others.")

The holiday gift campaign, which is also coordinated by the LEAP Committee, will be repeated this year.

Since 1969, when the first employee campaign that included non-United Way agencies was held at

the California laboratory, Sandians have supported the annual drives with \$1.9 million during 22 campaigns. Last year, they pledged a record \$163,500.

Members of the LEAP Committee in addition to Mark are vice chairman Randy Christman (8523),



Rita Hoak (1951), David Rosenzweig (5300), Bob Gallagher (8114), Rodger Page (8247), Loren Moyer (8284), David Chandler (8353), Glenda Muir (8453), Johnny Ellison (8613), and Carmella Orham (8713). Others providing support are Renee Haynes (8531), holiday gift coordinator; Mel West (8523), treasurer; Cheryl Lawrence (8716), agencies review coordinator and campaign secretary; Joan Bersie (8200), community involvement co-director; and Cindy English (8522), Jack Bishop (8535), and Cynthia Richards (8535), campaign publicity.

Sandians Volunteer Efforts to Help Others

Many Sandia employees are doing more for the community and human service agencies than pledging to the annual LEAP campaign. They have found personal satisfaction in volunteering time to help others in need.

A recent report from INTERACT (Interagency Coordinating Task Force), which serves the Tri-Valley, produced some startling local statistics:

- Local shelters and agencies served 48,000 meals last year.
- Local police agencies responded to 1,500 domestic violence calls.
- Some 2,000 people were homeless and sought shelter.
- At least 1,500 elderly are living at poverty level or below.
- Some 2,000 child abuse reports were filed with law enforcement and county agencies.
- There are 800 children in low-income families needing assistance.

These figures gave LEAP chairman Mark Perra (8714) the idea that community service and offering time to local human service agencies would be one more way Sandians could help — in addition to the financial aid that comes through the employee campaign. So there will be presentations during the LEAP drive from Tri-Valley Community Fund spokespersons, as well as from Sandians, to encourage people to volunteer throughout the year to help in local communities.

As an example of Sandians' work, here are four (among many others) who have already adopted volunteer programs as a way to share their time and talent:

Sandra Bowers (8284) joined the board of

Tri-Valley Haven in January. She says there is an emphasis on fundraising through fun events such as a Comedy Night, a Human Race, and a dinner dance. The board is beginning a capital fund drive to build a community services facility. Sandra also serves on the program committee, which oversees the services being provided to clients.

Ken Tschritter (8100) has been on the board of the local unit of the American Heart Association some four years and just began his second year as board president. He also spends considerable time on fundraising, community programs, and placing kits in elementary and junior high schools that help educate students about health issues.

Pat Smith (8522) is in her second term on the board of the Valley Volunteer Center, a group that promotes volunteering to meet community needs and fosters excellence in human service programs throughout the Tri-Valley. She says, "I joined because I was asked to do so, but stayed on because I wanted to. I have found that the experience and exposure to business and community leaders has expanded my personal and professional horizons." She now serves on the executive board as well as the personnel committee.

Mel Lagasca (1951) has a long history of volunteering in both the Stockton and Tracy areas. He serves on the boards of the Good Samaritans and the Boys and Girls Club in Tracy. He has also been a leader in the Associated Filipino Organization in Stockton for a number of years. He has been involved in numerous hands-on work projects and fundraisers.

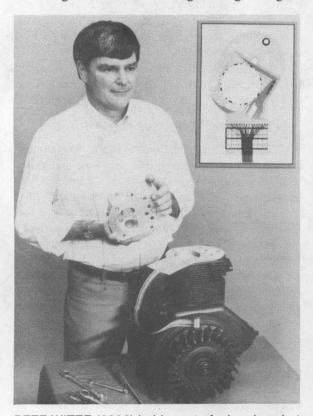
(Continued from Page One)

R&D 100 Awards

Facility in Livermore, Calif. The instrument incorporates ionization probes in a head gasket consisting of a multilayer printed circuit board made of glass-reinforced polymide resin. The probes, which are exposed electrical conductors, attract the free electrons in the flame, producing a distinct signal the instant the flame contacts the probes. This gives a measure of flame position versus time and can aid design optimization of the combustion chamber and related components of spark ignition engines.

The polymer modeling software was developed as the result of a statistical mechanical theory developed at Sandia by researchers John Curro, Research Team Leader for Molecular Engineering of Polymers Dept. 1702, and Kenneth Schweizer. That theory allows calculation of the effect of molecular size, shape, and architecture on the thermodynamic properties of polymer alloys. John and Kenneth, now a materials science and engineering professor at the University of Illinois, worked with Dana Honeycutt of BIOSYM to develop an integrated, user-friendly software system for polymer modeling.

The researchers expect the software to lead to new insights and molecular engineering strategies



PETE WITZE (8362) holds part of a head gasket assembly he developed to help analyze combustion efficiency in an automotive engine. The instrument incorporates ionization probes that attract free electrons in the combustive flame, aiding engineers who design engines.

for developing new, compatible blends and for improving the compatibility of existing incompatible polymer mixtures.

Richard Nygren of Sandia's Fusion Technology Dept. 6531 and his Argonne collaborators Jeff Brooks and Alan Krauss are the researchers honored for their work on the helium self-pumping concept. In developing the system, they drew upon early work on trapping helium and hydrogen by Sandia researchers Ken Wilson (Manager) and Art Pontau, both of Fusion Research Dept. 8347, and Walter Bauer, of Materials and Combustion Technology Support 8302, and supporting work by Bar-

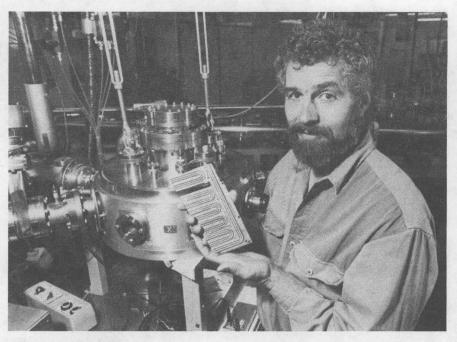
ney Doyle, Manager of Ion Solid-Interactions and Defect Physics Dept. 1111, and David Walsh, an Idaho State University scientist working at Sandia.

The Sandia-Argonne team worked with researchers at the German laboratory KFA to complete a successful proof-of-principle experiment on KFA's tokamak TEXTOR in Julich, Germany. The necessary experimental hardware was developed by the Sandia-Argonne team.

Avoids Plasma Dilution

The fuel in a magnetic fusion reactor is a plasma of deuterons and tritons, which fuse to form a helium nucleus. To avoid diluting the plasma, the helium must be continually removed. If conventional vacuum pumping were used, the fuel would have to be pumped and the exhaust gas processed to separate and recycle the fuel. With helium self-pumping, there is no conventional exhaust. Helium ions from the plasma are implanted in a host material at the edge of the plasma and trapped. Simultaneously, implanted deuterons and tritons are mobile in the host material and diffuse out and recycle to the plasma.

The solar detoxification system, developed over several years by Sandia and NREL, was successfully field tested last year on contaminated ground water at the Lawrence Livermore National Laboratory Superfund site. The system uses a reflective parabolic trough to focus the sun's energy on a long glass tube. As the contaminated water and a titanium dioxide catalyst are pumped through the tube, photocatalytic reactions break down the organic contaminants into carbon dioxide and, if the organics are halogenated, very low concentrations of simple mineral acids.



RICHARD NYGREN (6531) holds a section of a plate installed in the tokamak reactor at the KFA laboratory in Julich, Germany. A Sandia-Argonne team developed the hardware, in which helium was implanted and later measured at Sandia to verify that helium was pumped during the experiment.

At Sandia, the work on the system was done by members of Solar Thermal Technology Dept. 6216, managed by Craig Tyner. Along with Craig, other key contributors to the project were Jim Pacheco and Mike Prairie (both also of 6216), Larry Yellowhorse of Solar Thermal Test Dept. 6215, and John Holmes of Performance Assessment and Integration Dept. 6304.

•AEtheridge (7161)

R&D 100 Award Winners Show 'Commitment to Teamwork'

Paul Fleury, Vice President for Research and Exploratory Technology Div. 1000, who helped select the 15 Sandia projects submitted to this year's competition, had this to say about the competition and the Sandia winners:

"I know how high the quality was for all of our submissions this year, so I can appreciate how difficult a job the selection committee had in choosing the winners.

"This kind of recognition is important not only because it gives public visibility to the breadth and strength of our research capabilities, but also because it shows our people's commitment to teamwork.

"On behalf of all Sandians, I want to congratulate our four winning teams, and to thank them for the credit that their accomplishments reflect upon Sandia."



(Continued from Page One)

Orbiting Mailbox

advancing markets for US renewable energy products," says Sandia's program administrator Max Harcourt of Photovoltaic Systems Research Dept.

The VITASAT system combines two technologies: packet radio and a low-earth orbiting satellite. Packet radio transmits "packets" of digitized computer information via radio. Although packet radio can work independently of a satellite, when it is linked to one it becomes a ground station for global communications.

The VITASAT system acts as a global electronic mail system. When its low-earth orbiting satellite is within receiving distance over a ground station, the station transmits messages for storage in VITASAT's memory. The satellite handles messages or other computer files destined for a particu-

lar station even when the station is unattended.

Circling at an altitude of 800 kilometers, the satellite allows for communications with any spot on earth up to six times daily. Depending on the location of the source and the destination, a complete query-response cycle is possible within 24 hours.

Sandia responds to requests about renewable energy, coordinating its activities with an advisory committee that includes representatives of DOE, the US Agency for International Development, national labs, and industry.

The Sandia ground station became fully active and licensed by the Federal Communications Commission earlier this year. It's operated by staff members of the Renewable Energy Design Assistance Center, a DOE-funded program to assist in the acceptance and use of renewable energy technologies through educational outreach and technical assistance. Its goal is also to develop new markets for US renewable energy industries.

•JClausen(7161)

Take Note

Armed Forces Communications and Electronics Association is having a luncheon and a presentation about "Narrowband Radio Technology" on Tuesday, Oct. 20, at the KAFB Officers Club East. The pay-as-you-go lunch starts at 11:30 a.m., and the presentation is at noon. For information, contact Sharon Nichols on 6-2838.

Drivers are urgently needed for the American Cancer Society's Road to Recovery Transportation Program. The program provides transportation to cancer patients who have no other means of getting to medical appointments. Road to Recovery is staffed solely by volunteers. Time commitment can be as little as one or two hours per week, and training is provided. If you are interested in volunteering, please contact the American Cancer Society on 262-2333.

Open Enrollment Starts for Medical Plans, Reimbursement Accounts

Open enrollment for employees at Sandia, Albuquerque to select medical care coverage — the Lovelace Health Maintenance Organization (HMO) or the Sandia Medical Care Plan (MCP) — and to enroll or re-enroll in the Reimbursement Spending Accounts (RSA) will be held from Oct. 8 through Oct. 21.

Open enrollment for Sandia, Livermore plan participants for medical coverage and RSAs will begin Oct. 15.

Choices and Actions

If you are currently enrolled in the Lovelace HMO and wish to retain this coverage, you need not do anything.

If you are currently enrolled in the Lovelace HMO and wish to be covered under the MCP, you must complete both a disenrollment form for Lovelace and an enrollment form for the MCP.

If you are currently enrolled in the MCP and wish to retain this coverage, you need not do anything.

If you are currently enrolled in the MCP and you wish to enroll in the Lovelace HMO, please attend one of the employee or retiree HMO meetings (listed below) and complete a Lovelace enrollment form (no MCP disenrollment form is needed).

(Except for part-time employees working less than 25 hours per week and retirees who are currently paying some or all of their medical care coverage, there will be no premium cost to employees, retirees, and eligible dependents for the Lovelace HMO for 1993.)

If you are currently enrolled in one or both of the RSA accounts and you want to participate again in 1993, you must re-enroll.

If you are **not** currently enrolled in one or both of the RSA accounts but would like to participate in 1993, please attend one of the employee RSA meetings and complete an enrollment form. (Note: Only full- or part-time regular employees with six months of continuous employment are eligible to enroll in the RSAs.)

Open Enrollment Packets

Lovelace HMO enrollment packets will be available at the presentations and from the Albuquerque Benefits office beginning Oct. 8. HMO enrollment packets for Kaiser and Foundation will be available at the Livermore open enrollment presentation Oct. 20 and from the Livermore Benefits Office beginning Oct. 15.

RSA enrollment packets were mailed in late September to employees currently enrolled and to employees who do not reside within the Livermore or Albuquerque areas. If you do not receive your RSA enrollment packet by Oct. 8, please call (505) 845-9702. Enrollment packets for other interested employees will be available at the presentations or from the Benefits Department beginning Oct. 8.

All forms — HMO and RSA — for plan participants who are required to enroll through the Sandia, Albuquerque Benefits Office must be received at the Benefits Office by close of business on Oct. 21. Plan participants who are required to enroll through the Sandia, Livermore Benefits Office will receive separate instructions from that office.

Employee Enrollment Booklets

By now, every employee located within the Lovelace service area should have received a booklet titled "1992-1993 Coming Attractions: Open Enrollment — Health Care Benefits and Reimbursement Spending Accounts." This booklet provides a schedule of employee meetings to be held during the open enrollment period; a question-and-answer section, specific to enrolling in the Lovelace HMO and the RSA accounts this year; and a brief summary of the new mental health/chemical dependency and prescription drug benefits under the MCP. If you have not received your booklet, please call 845-9702.

Sandia, Livermore employees will receive information regarding open enrollment and MCP changes separately, from the Benefits Office in Livermore.

Employees in Nevada, Amarillo, and other remote sites should have received a brief summary of the new mental health/chemical dependency and prescription drug benefits under the MCP, as well as important questions and answers specific to enrolling in the RSA accounts this year. If you have not received this information, please call (505) 845-9702.

Retiree Enrollment Booklets

By now, every retiree located within the Lovelace service area should have received a booklet titled "1992-1993 Coming Attractions: Retiree Open Enrollment — Health Care Benefits." This booklet provides a schedule of retiree meetings to be held during the open enrollment period; a question-and-answer section, specific to enrolling in the Lovelace HMO this year; and a brief summary of the new mental health/chemical dependency and prescription drug benefits under the MCP. If you have not received your booklet, please call 845-9702.

Retirees who live within the Sandia, Livermore area and who normally enroll through the Livermore Benefits Office will be receiving their information concerning open enrollment and changes to the MCP separately from that office.

All other retirees do not have the option of enrolling in an HMO and therefore will not receive this booklet. Information concerning the new Managed Mental Health Network and Employee Assistance Program was mailed in mid-September. If you did not receive a copy of these booklets, please call (505) 845-9702. Information on the new Prescription Drug Plan will be mailed later in the year.

Employee Presentations

All presentations for employees will cover the changes to the MCP, including the new Managed Mental Health/Chemical Dependency Network (effective Oct. 1), the new Prescription Drug Plan (effective Jan. 1, 1993), and the change in contractors from Health Risk Management to Intracorp for review of medical/surgical hospitalizations (effective Nov. 1). The presentations will also include the expanded Employee Assistance Program.

Some of the presentations will also cover the

Lovelace HMO (nine meetings) and the RSAs (three meetings).

Schedules of employee presentations will be published in the *Weekly Bulletin* on Oct. 5, Oct. 12, and Oct. 19. Copies of the schedules can also be obtained by calling Sandia Line on 845-6789 — press 9, then 1071#.

Retiree Presentations

Retiree Lovelace HMO presentations will include benefits under both the Lovelace Health Plan (non-Medicare) and the Lovelace Senior Options Plan (Medicare). (See schedule below.)

Because seating is limited, call 844-5677 or 844-9272 to reserve a space.

Place MCP/EAP Date Lovelace Oct. 7 Coronado Club 8:30-9:20 a.m. 9:30-10:30 Base Theater* Oct. 8 1-1:50 p.m. 2-3 p.m. Oct. 12 Coronado Club 1:30-3:30 p.m. (Thunderbirds Meeting) Oct. 13 Coronado Club 6-6:50 p.m. 7-8 p.m. Oct. 20 Coronado Club 1-1:50 p.m. 2-3 p.m.

*Directions to Base Theater (Bldg. 20225): Take Wyoming to F St. Go west on F St. past First St. (blinking light). Turn left into the first parking lot after First St. The Base Theater is the building on the southwest corner of the parking lot.

If You Have Questions...

For questions about the Lovelace HMO, call Member Services at 262-7363, ext. 8190, or Sandia's personal Lovelace representative, Jaralyn Carda, at 262-7510, ext. 8026.

For questions about the Kaiser or Foundation HMOs, call the Livermore Benefits Department on 294-2254.

For questions about the RSAs, call Mary Blanford, the Mutual of Omaha on-site representative, on 844-0657, or Mutual of Omaha's home office on 1-800-365-6190.

The Benefits Department maintains current information about open enrollment under Sandia Line's "Hot News" in the Benefits area. Call 845-6789, press 9, then press 1070#.

Protecting Operations, Activities

OPSEC Awareness Week Offers Variety of Programs

The renewed emphasis on Operations Security (OPSEC) at Sandia will be on display during the week of Oct. 12, through posters, colloquia outlining OPSEC impact on Labs work, and Radio Sandia interviews.

OPSEC is an organized effort to safeguard classified and sensitive unclassified operations and activities that might be susceptible to exploitation by unauthorized people or organizations.

Ann Marie Griego of Security Requirements and Planning Dept. 7432, who is Sandia's OPSEC program manager, says although OPSEC has been in place at Sandia for a number of years, its importance is being re-emphasized DOE-wide.

US intelligence agencies say that with the end of the Cold War, foreign intelligence agencies are concentrating less on military secrets and more on commercial and industrial espionage — and that the foreign governments seeking this information include traditional US allies, as well as former adversaries.

Following is a list of activities and notices planned for OPSEC Awareness Week. Ann Marie says attendance at any of the presentations will count as fulfillment of the annual Security Refresher Briefing requirement if the attendance is validated by filling out and depositing forms that will be available at the presentations.

Monday, Oct. 12

Radio Sandia — Interview with Jerry Brown, Internal Security Coordinator for Safeguards and

Security Center 7400, and Ann Marie Griego. Posters at selected gates.

Schedule of week's events in Weekly Bulletin.

Tuesday, Oct. 13

9-10 a.m.; Area 4, Bldg. 962 — Ray Semko of DOE/HQ Office of Counterespionage, "Defense Information to Countering Espionage — DICE."

1-2 p.m.; Area 1, TTC (Bldg. 825) — Repeat of Ray Semko program.

Wednesday, Oct. 14

Radio Sandia — Interview with Jerry Brown and Ann Marie Griego.

10-11 a.m.; Area 5, Bldg. 6582 Conference Room — Repeat of Ray Semko program.

Thursday, Oct. 15

9-10:15 a.m.; Area 1, TTC — Jerry Brown, "Analyzing the Post-Cold War Threat," and John Taylor, Manager of Policy and Analysis Dept. 9241, "OPSEC and Arms Control."

1-2:15 p.m.; Area 5, Bldg. 6582 Conference Room — Repeat of Jerry Brown/John Taylor program.

Friday, Oct. 16

Radio Sandia — Interview with Jerry Brown and Ann Marie Griego.

1-2:15 p.m.; Area 4, Bldg. 962 — Repeat of Jerry Brown/John Taylor program.

Notes Sandia's Leadership in Industrial Partnering

Clinton Hails Labs as Reinvigorating Economic Resource

Praising Sandia's collaborative work with industry, presidential candidate Bill Clinton said such work by DOE labs could play a vital role in reinvigorating the US economy in the years following the end of the Cold War.

The Arkansas governor addressed Sandians two weeks ago in a colloquium at the Technology Transfer Center after touring the Microelectronics Development Lab.

"It is clear to me," he said, "that marshalling the vast scientific and engineering and technological resources of this country to the business of rebuilding America is critical to our future."

Following his speech, in answer to a question from the audience, Clinton said Sandia, Los Alamos, and Lawrence Livermore not only should not be shrunk, but "should expand in size" and focus their expertise on non-military industrial applications.

"It is absolutely imperative that we have a national economic strategy which includes a technology policy that permits us to take advantage of every resource we have in this country, and especially the national treasure represented by our labs," he said.

Clinton singled out Sandia's work in cooperative research and development agreements with private industry, attributing its lead in that area among DOE labs to Sandia's leadership and the Labs' "historic mission."

He said the technology policy he envisions for the United States would affect the national labs by emphasizing federal R&D in critical technologies and allocating 10 to 20 percent of national labs' funding to the kind of industrial partnerships in R&D that have accelerated at Sandia in the past year.

Clinton visited the Labs before speaking later that day at an outdoor rally on the University of

US Senator Jeff Bingaman introduces Bill Clinton.

New Mexico campus. He was introduced by US Senator Jeff Bingaman, who quipped that because of limited seating availability in the TTC, Sandians in the audience "are here because they won the lottery."

When Clinton rose to speak a few minutes later, he retorted: "I was over there cringing when Senator Bingaman said that you got here by lottery today. I can

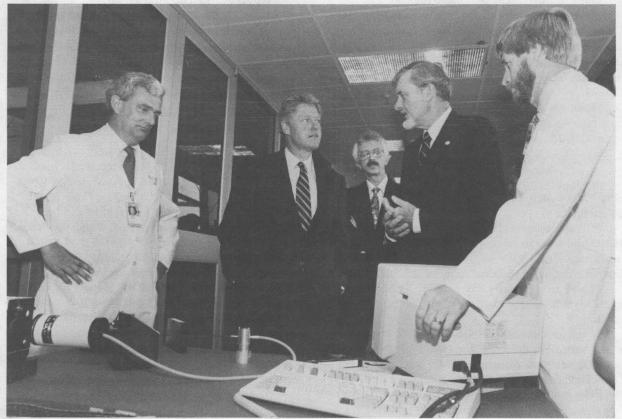
see tomorrow's headlines: 'Clinton Embraces Gambling.'"

Thick Stack of Information

Bingaman said Clinton had asked him a few months ago to assemble some information on technology and manufacturing, subjects he has championed in the Senate, and that "unfortunately for the governor, but maybe fortunately for us here in New Mexico" he sent a stack of papers three or four inches thick to him in Little Rock.

"Then, also unfortunately for Governor Clinton but fortunately for us in New Mexico, he got laryngitis" and read the information while taking time off from speaking, Bingaman said.

Before speaking, Clinton acknowledged others joining him on the stage: Bingaman, Governor Bruce King, Congressman Bill Richardson, Labs President Al Narath, and retired Sandia Vice President Ray Powell.



NON-INVASIVE glucose monitor work was showcased during presidential candidate Bill Clinton's visit to Sandia Sept. 18. The Arkansas governor, second from left, listens as Labs President Al Narath describes the development of the sensor, which is expected to eliminate the need for diabetics to prick their skin to obtain blood samples for monitoring their glucose levels. Others listening to Al's description are (from left) Jim Borders, Manager of Materials Compatibility and Reliability Dept. 1823, where the sensor was developed, Los Alamos National Lab Director Sig Hecker, and Dave Haaland, also of Department 1823.

Following is a text of most of Clinton's speech:

Let me say that I came here primarily to listen, to learn. I've already learned a great deal today and I want to get to your questions, but I would like to make a few points so that you know where I'm coming from.

I spent the last dozen years or so as the govenor of a state struggling to compete in a tough global economy, a state like New Mexico with an inordinate percentage of poor people but also a state full of bright and growing companies and a lot of entrepreneurial energy and people determined to compete in the world today.

One of the things we made up our minds to do was not to lose manufacturing jobs, and it worked to some extent. We were able to increase manufacturing jobs substantially, and for the last three months the Bureau of Labor Statistics has said for the previous 12-month period, we've led the nation in private-sector job growth.

Educate for Competitiveness

But it has also become clear to me over the last several years — and something I've been trying to talk about seriously for five years — that we are changing the job mix of America in a way that is not very hopeful for us, partly because we've not educated and trained our people to do the jobs that are fully competitive in a global economy and create high wages and high growth and high opportunity. For the last three years, because we have been reducing defense spending as we had to, we have done it without a strategy to reinvest all the money in high technology, high growth opportunities in this country, so the defense cutbacks which should have spawned an explosion of economic opportunities in the United States have instead aggravated our economic distress.

It is clear to me that marshalling the vast scientific and engineering and technological resources of this country to the business of rebuilding America is critical to our future. In the United States today, for example, only 16 percent of our work force works in manufacturing, compared to 28 percent in Japan and 32 percent in Germany. In those countries, they use technology to improve productivity and to do more work with fewer people.

Ironically, for example, in spite of all the jobs we've lost in the auto manufacturing industries in America in the last 10 years, we still use more people per car, we have more labor hours per car, than the Japanese do. The difference is their auto workers went to work in other, usually more sophisticated, manufacturing endeavors generating greater wealth and productivity for the country. Ours normally wandered around until their unemployment ran out and took a job at a lower skill level, making less money than they used to make.

It is absolutely imperative, then, that we have a national economic strategy which includes a technology policy that permits us to take advantage of every resource we have in this country, and especially the national treasure represented by our labs.

Technology policy, the environment, and arms control issues are still, as I'm sure all of you know here, because of the work you do, very major issues for us as we look ahead to the years of the 1990s and into the 21st century.

Labs 'at the Core'

The other point I want to make is that you have to be at the core of not only maintaining our national defense, but of finding ways to convert defense spending to domestic economic opportunity, promoting not only conversion but dual-use technologies; and to do that I do think we need a technology policy. I released one today.

The technology policy would affect the national labs in at least two ways.

First we would refocus federal R&D programs on critical technologies that have either dual uses or that enhance our economic performance. Today, of the \$76 billion we spend annually on R&D, 60 percent still goes to defense, 40 percent goes to commercial technologies. I would like to see it closer to 50/50, or with more emphasis on dual-use technologies.

Secondly, our 726 federal laboratories have a budget of \$23 billion, but much of that still reflects the priorities of the Cold War. I would very much like to see federal labs make a significant contribution, as this one is, to our competitive position, and

(Continued on Next Page)

Sandians Ask Questions, Clinton Gives Answers

Editor's Note: After his speech, Bill Clinton answered questions that the Sandia audience submitted before the colloquium began. US Senator Jeff Bingaman selected questions to ask Clinton in the available time. Because of space limitations, we are publishing only the questions and answers (condensed) that pertain to defense and the national laboratories.

Q: What do you see as the future role of Sandia and its sister laboratories, Los Alamos and Lawrence Livermore? Should the DOE laboratories expand or shrink, and why?

A: I think they should expand.

First of all, we need a lot of work on proliferation, what technologies can be developed to restrain it? If we develop an international agreement among the major arms technology suppliers to constrain proliferation, we still will need to know who's cheating as soon as possible and what we need to do about it.

Second, I want to have more cooperative research and development opportunities between the publicly funded laboratories and the private sector, with the focus on dual uses as well as purely commercial technologies.

Q: Where do you think cuts should be made in defense spending, and what would be your emphasis in defense-related research and development?

A: Let me first of all tell you what kind of defense I think we ought to have, because I think that when we start talking about defense cuts before we talk about what kind of defense we need, we're putting the cart before the horse.

One view is basically to downsize the defense structure we have, more or less across the board, except taking more out of the guard and reserves than the main forces. In other words, just make what we have smaller. The other might be called the piggybank approach, which is: The Cold War is over; let's just see how much money we can get out of the defense budget to do other things.

The proper question is: What are the security threats to the United States, what are our commitments to our own fundamental interests and to our allies, and how can we best meet them? If you look at the Gulf War, I think you see the two things that are best about what we do now that we need to do more of, and the one problem we still have

What was best about the Gulf War? Superbly trained and motivated personnel and world class technology. What was the problem in the Gulf War? Mobility. We had five and a half months to settle in. We might not ever have that much time to move people again.

So we would emphasize a smaller but very well trained and motivated force, new appropriate weapons technologies, faster sealift capacity, faster airlift capacity, fewer troops in Europe. I would spend less on the space-based portion of SDI, and I don't think we need 12 carrier groups.

Q: Sandia has great potential to do nonnuclear work but the transition is proving to be difficult, slow, and somewhat demoralizing. The same difficulties are being experienced in defense-related industries. Will you provide the labs with the continued support needed, even if the transition takes years?

A: Absolutely. One of the things we've got to build into our thinking is long-term benefits, and we've got to encourage people to try and fail. I mean, if you can't fail you can't succeed, if you're moving into uncharted waters. I feel the same way, by the way, about traditional industries. I think that we should have a transition in defense conversion which would give not only workers the opportunity to retrain but would give industries the opportunity to retool — let them carry over some of the funds for a while and try to retool. We won't make it everywhere, but this is an inexact business, you know, and so, yes, I would.

Q: Are you in favor of the comprehensive test ban treaty?

A: Yes, I am in favor of the one that I think Congress is developing, that I believe this administration will finally sign off on, which would permit some testing for a few years, working toward an absolute ban, providing testing for safety in the near term. I know there's a big dispute about this, but let me say that France has stopped testing, Russia has stopped testing, and I perceive the biggest threat in the future to be, as I've said earlier, the proliferation of nuclear technology as well as other weapons of mass destruction to other countries. And I think to contain that we ought to get out there and join the parade on working toward a comprehensive test ban and then focus our energies on this proliferation issue.

(Continued from Preceding Page)

one of the things that I want to do is to set aside 10 to 20 percent of that funding for the kind of joint ventures that have accelerated so dramatically here in this lab in just the last year.

I think it's fair to say that probably because of your historic mission and probably because of your leadership, it's been a bigger increase in a shorter amount of time, of cooperative research and development agreements here in the public and private sector, than in any other lab — at least that I'm familiar with. But we need to do much much more of this.

I want to see us do more of that, and not only in economic issues, but also in dealing with environmental technologies, which themselves are economic issues, and with some of the national defense issues that we still must face, especially the challenges we face in trying to find ways to contain proliferation of weapons of mass destruction.

Ominous Dictators

At the end of the Cold War, with the demise of the Soviet Union, if with your help we can in fact figure out how to first store and then dismantle and destroy the nuclear arsenals of the former Soviet Union, the biggest threat we will face in the future is the proliferation of nuclear, biological, and chemical weapons of mass destruction in the hands of dictators who obviously have very little concern for the casualties that might be inflicted on their own people.

One of the little known — it's well known but one of the little-chronicled — aspects of the Gulf War which makes the future so frightening is that Saddam Hussein, without apparently a second thought, took casualties at 1,000-to-one: an unparalleled ratio in the history of modern warfare, which indicates that it wouldn't take many Saddam Husseins in the world — with the capacity to use chemical, biological, or nuclear weapons — willing to take casualties at 1,000-to-one to wreak a great deal of havoc in civilization, even when the Cold War is over. So there will be things to be done in that arena which the labs will be a very

important part of.

I want to say, in all candor, that in this as in so many other areas I obviously do not have all the answers, and I want to urge you, all of you collectively through your leadership in appropriate channels, to feel that you will be a full partner in the crafting of America's post-Cold War defense systems and the revitalization of America's economy and the solving of many of America's

environmental and health care problems.

We are living in a world where brain power will determine the lives of all of our people. We have these incredible resources, but only scratch the surface of their potential, and I want to make sure that each of you has a chance to contribute your full potential to the welfare and to the future of your country.

Thank you very much.



ARKANSAS GOVERNOR Bill Clinton greets Sandians after his speech in the Technology Transfer Center. New Mexico Governor Bruce King (left) and Congressman Bill Richardson accompanied Clinton during his Sandia visit. The presidential candidate's Sept. 18 speech and tour of the Labs came just three days after President Bush's speech and tour. Both of the presidential candidates discussed issues of particular interest to Sandia and other R&D labs.

Quality Month Events

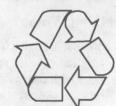
Events planned in observance of National Quality Month at Sandia include:

Oct. 5 through 7 — Quality Tools Forum, Aahmes Activity Center, Livermore.

Oct. 12 — "Union Understanding of TQM — A Must," Joseph Sensenbrenner, past mayor of Madison, Wis., 10-11:30 a.m., Technology Transfer Center, Albuquerque.

Oct. 15 — "Successes in a New Culture" (Quality Tools Focus), 8 a.m. to noon, Building 822 A/B, Albuquerque.

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Has Saved Perhaps 40 Raptors

Falconer Ed Schaub Rehabilitates Birds of Prey

A would-be falconer needs thick gloves — plus a knowledge of hawks and falcons and plenty of perseverence and patience. Those are some of the qualifications that Ed Schaub (9135) brought to his work with hawks and falcons, to which he has devoted much of his personal time for the past five years.

A licensed falconer, Ed became interested in falconry when he found a wounded red-tail hawk along the roadside. The rewards of handling birds such as Harris hawks and prairie falcons, says Ed, include feeling a part of nature while working in harmony with the birds.

"These birds are not pets," Ed stresses. "They're birds of prey that hunt to survive in the wild. We

teach these birds to allow us to watch them."

When handling birds of prey, says Ed, you must do it their way. "They cannot be reproached; a stern voice carries no weight," he says. "What you do must be in harmony with their nature."

A federal license is required to keep hawks and falcons — and is obtained only after passing a 100-question test administered by the US Fish and Wildlife Service. The test covers federal and state regulations, raptor diseases, and falconry requirements. Facilities for keeping the birds, called mews, must also meet federal standards and pass inspection by a conservation officer.

Falconers serve two-year apprenticeships,

during which they are allowed to have only one bird from one of two common species. They then receive a general class permit good for five more years allowing them to have as many as two birds of any species that isn't endangered. The next class, master falconer, allows as many as three birds and, with proper permits, bird can be endangered. (Ed will be a master next year.)

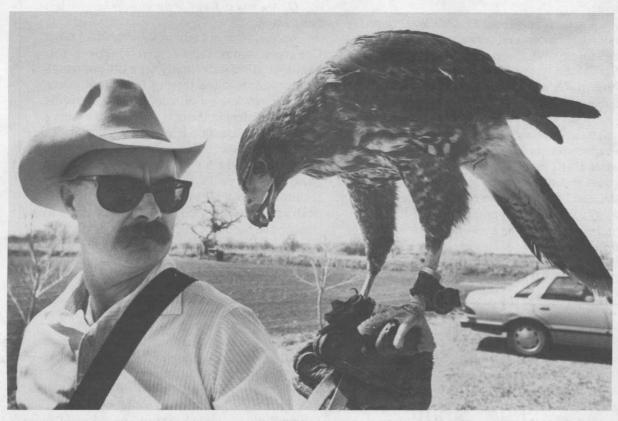


A SHARP GAZE from this male prairie falcon reminds onlookers that birds of prey are not pets.

Special permits are required to take a bird out of the wild, such as an eyass (nestling) or a passage bird (less than one year old). Some falconers also have permits to breed birds in captivity. Permits are very seldom issued allowing a falconer to take a haggard (an established bird more than one year old) from the wild, says Ed.

Ed works under a special permit to rehabilitate injured or sick birds and return them to the wild. He says he has saved perhaps as many as 40 birds since he became interested in falconry. "Eight out of ten raptors do not survive into adulthood," he says.

He says falconry has given him the opportunity to become more aware of the environment, the seasons, and the wildlife around him. "It's not a hobby any more," he says. "It has become a way of life."



FASCINATED BY FALCONS — Falconer Ed Schaub (9135) holds a male Harris hawk. Sharp talons and strong feet make thick gloves a necessity. (Photo by Mark Poulsen)

Medical Corner

Becoming a Member of a Stepfamily: One of Life's Challenges

by Arlene Price (7035), Sandia Clinical Psychologist

One of the most challenging life experiences many of us face is becoming a member of a stepfamily. While the phenomenon of stepfamilies has grown by leaps and bounds, it is a topic that few people like to discuss.

Recently, I came across an article that suggested that the nuclear family of the 1950s is no longer the model family, but only one of a number of different family patterns for the '90s. In fact, according to the article, only 36 percent of American families today are married couples with children.

One of the most rapidly emerging types of non-traditional families is the stepfamily, defined as a family in which at least one adult is a step parent. Today, one in three Americans is a member of a "blended" family, and that number is expected to increase to one in two by the turn of the century.

Something Wrong?

Unlike new families, in which a married couple has children for the first time, members of stepfamilies have to deal with the breakup of their original family. Often, this separation remains incomplete. Parents may feel self-conscious about their stepfamily status, or they may have unrealistically high expectations for themselves. When they feel anger or frustration toward their new spouse or children, they may think something is

wrong with them. Often, if a step parent admits to having problems, families and friends say, "You knew what you were getting into." In fact, it's impossible for anyone to know what they're getting into.

Children in stepfamilies also experience unique pressures, including divided loyalties, the question of "Where do I belong?," membership in two households, hopes that their natural parents may someday reunite, and becoming accustomed

Special Presentation on Stepfamilies Is Oct. 16

Sandia Medical Center's Employee Assistance Program (EAP) is sponsoring a talk about the special needs and challenges of stepfamilies by Albuquerque psychologist Dennis Pilgrim, Ph.D. The presentation is scheduled for Friday, Oct. 16, from noon to 12:45 p.m. in the Technology Transfer Center (Bldg. 825). Spouses are welcome. For more information, contact Arlene Price (7035) on 5-8729.

to new step parents and siblings. Children wonder how they are supposed to act with new step parents, stepbrothers, and stepsisters, and they may feel guilty if they have feelings of anger or jealousy toward them.

Other pressures stepfamilies must contend

with include rivalries between step parents and natural parents and stepchildren and natural children, established ties from the previous family, and matters of custody, finances, and visitation. As a result of these complicated and confusing problems, members of stepfamilies sometimes feel the best course of action is to say nothing, to avoid the problems, and to keep their feelings to themselves.

Safe to Communicate

Every family needs to learn how to compromise, especially stepfamilies. But family members need to realize that learning to negotiate is a very slow process. For some families, professional counseling is advised. Such counseling provides a forum whereby family members can learn that it is safe to communicate about their concerns.

Even in the best of circumstances, remarriage is a difficult adjustment. But many people are able to create new families without debilitating stress. As in any family, good communication should be developed. Compassionate understanding can lessen the hurt and aid the healing process. And couples can nourish their relationships despite the obstacles. With appropriate knowledge, information, and support, many potentially defeating situations can become valuable growth experiences and can lead to enriching family lives.



Sandia News Briefs

House and Senate Approve New Mexico R&D Funds

US Senator Jeff Bingaman announced recently that the US Senate and House of Representatives have approved funding for various New Mexico R&D programs through the FY93 Energy and Water Development Appropriations Bill. The multi-million-dollar appropriations bill includes funding for verification technologies (\$327 million), for environmental R&D (\$320 million), and for lab-industry partnerships (\$141 million).

Much of the work is expected to be carried out by Sandia and Los Alamos national laboratories. The bill also contains a nuclear test restraint provision and money for water projects across the nation. As of Sept. 29, the bill had been sent to President Bush for review.

Sandia Will Help Design Tritium Production Accelerator

Sandia will work with two other DOE labs and private industry toward designing a particle accelerator to produce tritium. DOE has asked Congress for \$30 million for a study of the feasibility of using an accelerator to produce tritium, a radioactive gas used to boost the power of nuclear weapons. Accelerators are believed to produce much less radioactive waste and be safer to operate than reactors, which have been used to produce tritium.

Sandia will join Los Alamos and Brookhaven national laboratories in the project, which also has attracted interest from more than three dozen private companies.

Bumblebees Toastmasters Club Looking for Members

The Bumblebees Toastmasters Club is looking for new members interested in improving their speaking skills. The club is affiliated with Toastmasters International, a non-profit organization devoted to helping members improve their speaking skills through frequent practice in a supportive environment. Made up of members from Sandia, DOE, the US Air Force, and New Mexico Air National Guard, the Bumblebees meet each Tuesday at 4:45 p.m. in the Building 831 (Sandia Medical Building) conference room.

Anyone interested in joining can visit a meeting or call Ragon Kinney of Guidance and Control Dept. 2334 on 4-7390.

Sandia Researchers Develop Jet Fuel Monitor

Five Sandia researchers have developed a quartz sensor that monitors jet fuel decomposition at high temperatures. The sensor measures the mass of solids that accumulate on metal surfaces in fuel lines and other parts of aircraft fuel systems. Steve Martin of Microsensor Research Dept. 1315 says when jet fuel gets too hot, it can degrade and clog fuel lines. It is hoped that the research, sponsored by the Air Force but applicable to non-military aircraft too, will lead to development of advanced jet fuels that inhibit degradation, says Steve.

Other members of the research team are Leonard Casaus, Greg Frye, and Tony Ricco, all of 1315, and Elmer Klavetter of Process Research Dept. 6212.

New 'Facilities Express Service' Tackles Smaller Projects

Sandia's Facilities organizations have established a new "Facilities Express" service that is significantly reducing the time it takes to complete relatively small design and construction projects. The service team in Dept. 7947 tackles only projects that do not exceed \$5,000 in total cost and that require less than 16 hours of engineering time. Experience with more than 1,500 customer requests during a 16-month pilot program shows that most Express service orders are completed in 90 days or less.

The Express Service includes design, construction, and inspection at the time of completion. For more information, contact your organizational facility coordinator, your Facilities customer representative in Dept. 7012, or the Facilities Express Coordinator in Dept. 7947 on 4-8893. A new form, "Request for Facilities Express Service" (SA6610-FES), is available through Just-In-Time.

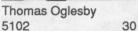
Send potential Sandia News Briefs to Editor, Dept. 7162.



COLORFUL DANCERS from the Baile Folklorico Troop at Albuquerque's Del Norte High School helped kick off Hispanic Heritage Month at Hardin Field on Sept. 15. The opening ceremonies, sponsored jointly by Sandia, DOE, and Kirtland AFB, attracted a good crowd that enjoyed these dancers, a Mariachi band, some fine food, and delightful weather. Former New Mexico Governor Toney Anaya was keynote speaker. Hispanic Heritage Month continues through Oct. 15.

Recent Retirees







Tommy Glauner 2341



Bill Stephenson 6214



16

42

Bob Blackburn 1237



Al Heckes 6215



Bob Fleming 2414

Fun & Games

33

35

Softball—Following are the Sandia Labs Softball Association post-season tournament results: A League — Naturals, first place; FatCats, second place; and Hofbrau, third place; B League — Rhinos, first place; Slowballers, second place; and Metallurgy Clergy, third place; C League — Bombers, first place; Desperados, second place; and Desert Rats, third place; D League — NC&C, first place; Deadwoods, second place; and Bullheads, third place.

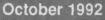
Hiking — The New Mexico Youth at Risk Foundation will hold its 4th Annual "Making Tracks" Hike-a-thon on Oct. 17 along Sandia Crest. Hikers can choose a 5- or 10-kilometer course and begin hiking at 9 a.m. from the Crest House. The goal is to raise \$15,000 in funds to benefit child programs. Friends, family, and coworkers sponsor hikers by pledging an amount per kilometer hiked. All hikers who raise \$50 or more receive a T-shirt. For information, contact the New Mexico Youth at Risk office on 888-1801. Volunteers are needed from 3:30 a.m. to 1:30 p.m. to support the hikers on the day of the event. To volunteer, contact Marsha Johnstone on 294-6543.

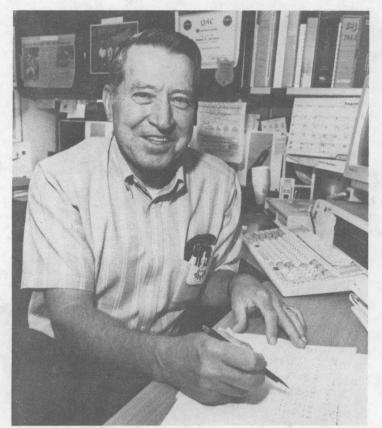
Sandia Mountain Cloggers are offering beginner clogging lessons starting Tuesday, Oct. 6, from 7 to 8:30 p.m. at First Unitarian Church (7401 Carlisle NE, across from KOAT-TV). Cost is \$30 for eight weeks. Partners aren't required for clogdancing, just comfortable shoes. Call L.B. Lukens on 299-1271 for more information.

Help Us Recognize Sandians

The LAB NEWS wants to recognize Sandia employees and retirees who receive honors and awards. Give us a call at 844-7841, or send a note with a few details to Department 7162. In Livermore, contact Barry Schrader (8522) on 294-2447.

MILEPOSTS LAB NEWS





Ronald Zottnick



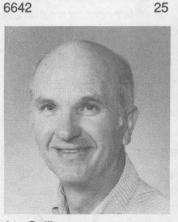
Don Wagner



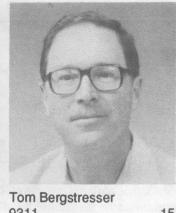
Carolyn Pura

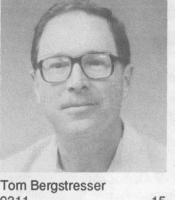
Marcella Madsen

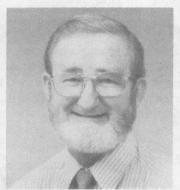
Glenn Hohnstreiter

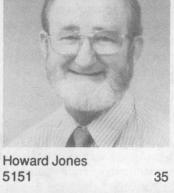


Jan Collins











Tim Taylor



Marlin Pound



Charlie DeCarli



Paul Brewer



Everitt Davis

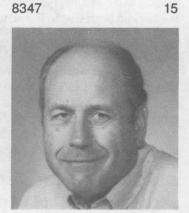
Al Salmi

LaVonne Hill

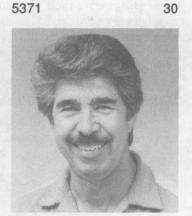
Mike Birnbaum



Bob Bastasz



Roger Everett

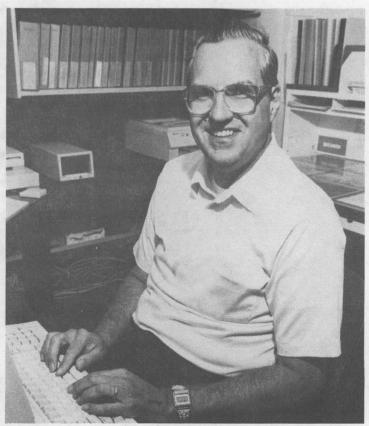


Tony Marquez 2473



Curtis Warthen





Ron Domres

Take Note

"A Vision of T&E in the 21st Century" is the theme of the International Test and Evaluation Association's 1992 annual symposium to be held Oct. 12 through 15 at the Albuquerque Hyatt Regency Hotel. Short courses on systems testing

and simulation study requirements will be conducted Oct. 12; the symposium starts Oct. 13. Admission to exhibits is free. For symposium information and a registration package, contact Roger Offerdahl on 766-5000 (fax 766-9580).

Congratulations

To Mary Linn and Mike (1433) Furnish, a daughter, Rebecca Jean, July 31.

To Chris and Glenn (1323) Bailey, a daughter, Stephanie Rae, Sept. 15.

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Ad Rules

- 1. Limit 20 words, including last name and home phone (the LAB NEWS will edit longer ads).
- Include organization and full name with each ad submission.
- Submit each ad in writing. No
- Use 81/2 by 11-inch paper.
- Use separate sheet for each ad
- Type or print ads legibly; use only CANON A-1, w/FD50 lens, power accepted abbreviations
- One ad per category per issue.
- No more than two insertions of same "for sale" or "wanted" item.
- No "For Rent" ads except for employees on temporary assignment. No commercial ads.
- For active and retired Sandians and DOE employees.
- Housing listed for sale is available for occupancy without regard to race, creed, color, or national origin.
- "Work Wanted" ads limited to student-aged children of employees.

MISCELLANEOUS

- GOLD AND SILVER COINS, US mint, 1986 and 1987, 4 sets, 2 coins ea., \$1,450. Sikora, 881-4741
- INFANT/TODDLER CAR SEAT, Century 5000 STE, excellent condition, paid \$70, asking \$35 firm. Denaple, 298-2778.
- PIANOLA, player piano w/100 rolls, excellent condition, \$1,200. Carter, 821-6383
- SPEEDWRITING instruction books and cassettes, complete set including dictionary. Wagner, 823-9323.
- DISHWASHER, brown, portable, \$50. Hughes, 821-0971.
- SUMMAGRAPHICS SummaSketch Plus, 12" x 12", digitizing tablet, w/stylus, puck, and latest Windows & AutoCAD software, \$230. Luther, 293-4462
- COMPLETE 486-33MHZ, 2MB RAM, 360K & 1.2K FD, 40MB HD, modem, mouse, printer, monitor, cables, computer stand, software, \$1,595 OBO. Norton, 299-3763.
- TRAILER HITCH, frame-mount for '92 Olds 88 or similar chassis, 3,500-lb.
- capacity, \$55. Holmes, 292-0898. SWIVEL ROCKER, blue, excellent condition, \$100. Treml, 888-3917 BEAUTIFUL ANTIQUE BIRDCAGE,
- w/stand, \$75. Stewart, 293-5083. OCEANFRONT RESORT, Five-Star (Interval International), 2-bdr condominium in Maui, Hawaii, Dec. 18 25, less than half price, \$610.
- Schow, 293-0543. AJAY EXERCYCLE, \$50. Schalles, 865-3075
- APPLIANCES: white 17-cu.-ft. refrigerator, \$275; white washer & dryer, \$350; almond gas range, \$150; all in excellent condition. Baca, 271-2962.
- STEREO SYSTEM, 10-in, kickers (4) amplifiers, pull-out cassette, CD changer, equalizer, will sell separately or trade for Daytons, Mcleans. Montoya, 272-8150.
- READING READINESS PROGRAM. World Book Early World of Learning excellent condition, \$250 new, sell for \$125. Dunkin, 293-8801.
- COMPUTER, Amiga 2000HD-P, 1MB RAM, 50MB hard drive, color monitor, complete software package, purchased new '92, \$1,600. Castillo, 897-4560.
- COMMODORE 64 COMPUTER, Commodore printer, disk drive, tape drive, lots of software, \$125. Connor,

- (has water-filled tubes inside quilted mattress), frame included, \$100. Vanecek, 299-3472.
- TRAILER HITCH, for full-size pickups, 10,000/1,200 lbs. trailer/tongue weights, \$75. Newton, 292-4277.
- QUEEN-SIZE WATERBED, w/bookcase headboard, \$75. Kitta, 823-9317
- NURSING UNIFORMS: white Swan, G.A.L., sizes 10, 12, some talls, dresses, skirts, & blouses, all almost new. Furnish, 344-6074.
- RIFLE SCOPE, new in box, never mounted, Burris 2X-7X full field duplex. Schaub, 865-8807.
- winder, flash, Vivitar 28mm wideangle & 100-300mm zoom lens, fil-OBO. Best, 299-3902
- PANASONIC PRINTER, 24-pin KXP 1123, \$150. Schroeder, 296-1011. FISCHER SKIS, 210cm, fiberglass, \$25;
- Salomon ski boots, men's 11-1/2, \$25; Kodak Encyclopedia of Photography, \$10. Ball, 242-5187. EXERCYCLE/PROFESSIONAL TRAIN-
- ER, Genuine Tunturi Amerec, 15step load adjustment, tachometer, 0-200-rpm, timer, excellent condition, \$250. Perryman, 281-3020.
- SOFA HIDE-A-BED, full-size, foam mattress, tan plaid fabric, very good shape, \$100. Spielman, 292-4953.
- COLEMAN FURNACE, 80,000-Btu, upflow, propane, good condition, \$50; Cannon E53 electronic typewriter, new, unused, \$60. Graham, 865-9427
- HALF-ARAB PINTO GELDING, registered, 15H, flashy, healthy, intelligent, sociable, goes Western or English, \$1,000 OBO. Baldo-Pulaski, 345-1288.
- OT TUB, portable, Softub 4-jet model, 6-ft. diam., 250-gal., 110-volt, w/cover, very economical, excellent condition, \$1,250. Patrick, 265-4569.
- HALLOWEEN COSTUMES, red devil, white angel, woman's small, w/accessories, \$25/ea. Lemaster, 877-4884 after 5 p.m.
- THREE KOHLER VANITY SINKS, w/faucets; new mailbox. Baca,
- WHIRLPOOL REFRIGERATOR, 22.4 CALICO CAT, loving, healthy, spayed cu. ft., w/ice maker, frost-free, \$500 OBO. Madison, 271-9068.
- LEICA CL CAMERA, w/40mm Summicron lens, original boxes, instructions, yellow filter, \$500. Smith,
- LUGGAGE RACK, fits any size car, \$20; electric adding machine, 10-key, excellent condition, \$20. Anderson, 897-2772
- UTILITY TRAILER, 18-ft., \$1,200; new Sears 73-grain water softener system & iron-removal system, all instructions, \$765 new, will sell \$425/both. Nadlener, 256-1071
- CAMPER JACKS, \$50; tailgate for '81 Chev. pickup, \$50; running boards for Chev. Blazer, \$50. Myers, 828-1967
- CHILDCRAFT CRIB'N'BED, honey oak, bed, excellent condition, originally \$650, will sell for \$350 OBO. Reno, 296-6290.
- ROTTWEILER PUPS, 3 mos. old, \$150. Baca. 864-4358.
- WEIGHT & EXERCISE MACHINE, DP Chairman, like new, \$150. Bland, 265-6286
- BABY TROPICAL RED LOBSTERS. 1 week old, \$2.50/ea. Ennis, 298-3631.
- ORGAN, excellent condition, original cost \$1,500, will sell for \$750. Haynes, 293-9208.
- TRAVEL TRAILER, '73 Holiday Vaca- CAMPER SHELL for full-size long-bed tioner, 23-ft., AC, heat, refrigerator, new water system, self-contained, \$2,200 OBO. Andraka, 294-2618.

- QUEEN-SIZE WATERBED, soft-sided OAK STEREO CABINET, \$120 OBO; Danish-style chairs (2), \$15/ea. Lott, 298-8071
 - CHINA CABINET/BUFFET, w/lights, matching serving cabinet, med. oak excellent condition, \$1,000 OBO. Uhl. 298-6391.
 - K2-LASER SKIS, 180cm, Tyrolia 360 bindings, \$75; San Giorgio boots, size 11-1/2, \$30. Oberkampf, 292-4366
 - AKAI 747 REEL-TO-REEL TAPE DECK, DBX noise reduction unit. tapes, hardly used, \$375 OBO. Peerv. 271-9683
 - WASHER & ELECTRIC DRYER, Kenmore heavy-duty, white, \$150/set; couch, solid oak frame, English country style, \$150. Kiekel, 294-6547
 - ters, tripod, & bag, package \$550 '91 AVION FIFTH-WHEEL TRAVEL TRAILER, 35-ft., w/slide, fully loaded, including TVs & VCR, like new, \$32,000. Habbit, 291-0293.
 - SPACE HEATER, 50,000-Btu, burns J-1 or kerosene, automatic burner & circulating fan, weighs 100 lbs., 36 x 26 x 28-1/2, new, half price, \$500. Tedesco, 888-1068.
 - GOOD LEARNER'S SKIS, Dynastar Starsoft, 185cm, Look Nevada Grand Prix bindings, poles, woman's size 9 Nordica boots, \$125. Leeman, 299-9149.
 - POOL TABLE OVERHEAD LIGHT, colorful poolroom design, w/word "billiards" both sides, 40L x 16W x 12H, \$75. Moss, 881-2377
 - ELECTRIC MOWER, \$50; 2 evaporative precoolers for refrigerated air conditioners, new, \$75/ea.; car stereo cassette player, \$40. Glaser, 293-8110
 - COMMODORE 64 COMPUTER, disk drive, printer, Easy Script word processor, games, \$95; area rug, brown/beige, 8 x 10, \$70. Follstaedt, 299-5941
 - DANSK DISHES, cups, saucers, incomplete set, \$20; Sears Lifestyler 2400 rower, electronic display, \$40; ZX81 computer, printer, memory, \$25. Barnette, 292-5186.
 - PORCH SWING, hardwood, 6-ft., excellent shape, \$20; Yamaha keyboard, like new, \$50. Miyoshi,
 - female, seeks new home & companions, has own belongings (food, bidet), free. Smiroldo, 898-1699.
 - METAL FOLDING TABLE, 3' x 6', never used, \$45. Pinkerton, 260-8243. EXERCISE EQUIPMENT: Schwinn exercycle, electronic controls, \$225; Tuntouri rowing machine, \$125; both like new, all original documents
 - available. McEwen, 293-9074. CLEARING IT OUT SALE: Oct. 9 & 10, 10 a.m., 34 yrs. accumulation, tools, lawn furniture, luggage, clothing, shoes, 7013 Comanche Rd. Piper, 884-4484.
 - ANTIQUE SPOOL BED FRAMES, \$125/ea.; Atari 800XL computer, disk drive, touchpad, lots of software, no monitor, \$75. Knapp, 294-6359
 - EST OF DE 52W x 18D x 42H, \$60; 4-slidingdoor credenza, \$35; walnut finish end table, \$40. Stang, 256-7793. DEC LA-50 DOT-MATRIX PRINTER,
 - HP inkiet printer. DEC daisywheel printer, all w/serial interfaces, \$100/ea OBO Barnard 256-7772 BABY CRIB. w/mattress. \$175:
 - playpen, \$30; car seat, \$30; 2-seat stroller, \$40; swing, \$30; more baby items. Murphy, 260-0082. BOZAK SPEAKERS, 15-in., plus tweet-

ers in elegant cabinetry, \$50/both.

Neal, 299-4956. pickup, aluminum/white, w/slider windows & paneling, older, \$75. Ely, 281-0330.

TRANSPORTATION

- '85 MUSTANG GT, 5.0 L, 5-spd., Ttops, fully loaded, 71K miles, \$3,800. Garcia, 298-2898.
- '86 MERCURY LYNX XR-3, 65K miles. loaded, red, w/spoiler, ground effects, 5-spd., cruise, AC, 30-mpg, FWD, 4-cyl, 1.9 liter, \$3,000. Mc-Claflin, 292-3543.
- '64 GMC PICKUP, good condition, needs paint job, in CPI book, \$2,000 OBO. Riley, 281-2059.
- '86 THUNDERBIRD, needs TLC, best offer. Graham, 836-2752.
- MAN'S 12-SPD. BIKE, Lotus Prestige, barely ridden, \$250. Furnish,
- '82 DODGE OMNI, standard transmission, 104K miles, looks good, ran great, needs clutch, \$200 OBO. Ballard, 828-2504.
- '82 JEEP WAGONEER, sunroof, AC, stereo, tape deck, tinted windows, PS, PB, leather seats, rack, all service records. Blewer, 268-9019.
- '23 "T" BUCKET 327 CHEV. HOT ROD, turbo AT, Ford rear end, blue w/tan interior, fast, \$9,000 OBO. Marchi, 291-9681
- '86 KAWASAKI CONCOURS, 37K miles, excellent condition, \$1,900 OBO; 3-rail motorcycle trailer, w/extras, \$150. Madison, 271-9068.
- '90 HONDA ACCORD EX, 2-dr., AT, fully loaded, exceptional condition, 1 owner, 81K highway miles, w/extended warranty, \$12,500. Jones, 299-6186
- '74 OPEL WAGONS, 1 standard, 1 auto, complete cars w/misc. parts, can run great, sell or trade. Harrison, 281-4855
- '89 MECURY SABLE GS, AT, AC, AM/FM, 36K miles, excellent condition, \$7,400. Padilla, 299-6412.
- '72 CHEVELLE MALIBU, 350 V-8, 4-dr., AC, AT, stereo tape deck, 1 owner, complete maintenance records, \$850. Schneider, 299-6243
- MCGREGOR 25 SAILBOAT, 10-hp Honda, trailer, main & 2 head sails, radio-cassette player, jackets, other extras, well maintained, \$5,200. Feltz, 293-8732.
- TWO BIKES, woman's 5-spd., 10-spd., \$20/ea. Lemaster, 877-4884 after
- CUSTOM DELUXE VAN, 54K miles, CB, dual AC, cassette radio, wired for TV, new tires, excellent condition. Kelly, 299-9130.
- EAM MURRAY BICYCLES: boy's, black, 18-in.; girl's, pink, 18-in.; both in good condition, \$45/ea.
- Follstaedt, 299-5941 89 CHRYSLER NEW YORKER, Landau, 56K miles, V-6, AT, PS, PW, PB, AC, excellent shape inside & out, \$9,500 OBO. Castillo,
- 897-4560 '48 CHRYSLER NEW YORKER, Club Coupe, 2-dr., straight eight, all original, runs well, many extras. Gosling, 884-8543.
- '86 MERCEDES BENZ 300E, blue, gray leather, sunroof, 69K miles, excellent condition, below book, \$17,500. Thorne, 884-4870.
- '83 HONDA ACCORD LX, hatchback, runs well, some body & power steering work needed, below book, \$1,200. Love, 271-9970.
- '83 HONDA SHADOW 500, 1,300 miles, black, \$1,500 OBO. Estill, 883-1531.
- '87 CORVETTE COUPE, 33K miles, glass & hard tops, 2-tone silver, AT, leather, Bose stereo, \$17,500. Raymond, 822-4700.
- WOMAN'S BICYCLES: Schwinn 3spd., \$15; Sears 26-in. 10-spd., \$15; Sears 24-in. 10-spd., \$20. Miyoshi, 821-9118.
- '80 MAZDA PICKUP, w/camper shell, good overall condition, \$1,895. Lucero, 265-4824.

15-FT. TRI-HULL, 70-hp Johnson, trolling plate, Hummingbird LCR, Minnkota trolling motor, front fishing chair, walk-through windshield, \$2,500. Luikens, 271-0019.

REAL ESTATE

- 2.5-ACRE LOT, on west side of No. Hwy. 14 in Cedar Crest, includes power, well, septic, & is fenced, \$60,000. Habbit, 291-0293.
- 3-BDR. HOME, 1-3/4 baths, 1,300 sq. ft., plus 900-sq.-ft. workshop/garage, 1/4 acre, city utilities, security iron, \$64,500. Roth, 344-7060.
- NE DUPLEX, earn \$320/mo. rent from other apartment, down payment plus closing is \$6,000, \$90,000. Grant, 821-3822.
- 3-BDR. HOME, 1 bath, 1,700 sq. ft., 1.2 acres, on Tapia SW, all city utilities, \$76,500 by owner. Clark, 869-2569.

WANTED

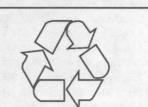
- ROOMMATE, non-smoker, to share 3bdr., 2-bath house, big yard, 2-car garage, \$300/mo. plus 1/2 utilities. Lambert, 899-2060.
- RESPONSIBLE ROOMMATE(S), couple or singles, to share newly remodeled house, private bath, offstreet parking, NE Heights, \$350 for 2 bedrooms. Vickers, 298-0418.
- SMALL COMPRESSOR or CO2 tank & regulator for airbrush, also illustrator's airbrush for fine detail work. Rodacy, 293-2668.
- OLYMPUS OM-1n body (will consider lenses), will pay shipping. Cox, 510-455-9730.
- DAYTONS, McLEANS, 15 x 10, 6-hole, gold spokes, nipples, & knock-offs preferred, will trade stereo system worth \$3,000. Montoya, 272-8150.
- ROOM TO RENT OR HOUSESIT-TING, Jan. 3 through March 31, Sandia co-op student. Rohwer, 1-325-7274, call collect after 5 p.m. STEEL FILING CABINET, 4-drawer.
- Baca, 262-0596 POLAROID 600 INSTAMATIC FILM UPC LABELS, needed to earn free cameras for elementary school.
- Kellogg, 299-3737 OLD CHILE RISTRAS & whole red chiles in good condition, will pay cash. Brooks, 275-0056.
- HOUSESITTING OPPORTUNITY or rental home while our new home is being built, November 1992 to April 1993. Gillings, 884-0853.
- CHILD'S TOY called a "Popple," good condition. Casper, 266-2625, leave

LOST AND FOUND

FOUND: Mizuno softball glove at Manzano field, Sat., Aug. 22. Denning, 299-5843.

SHARE-A-RIDE

CEDAR CREST VANPOOL has openings, Frost Rd., N-14, Tijeras. Yelton (281-2893) or Burns (281-3922).



This newspaper can be recycled with Sandia office paper

Coronado Club Activities

'Crossfire' = C&W + Variety 2-Nite

C-CLUB DEBUT — The band Crossfire takes the Club stage for the first time tonight, Oct. 2. The group specializes in country and western, but also plays enough variety to meet most any taste. Crossfire will be on stage from 7 to 11 p.m. Dinner's gonna be suitably special for this special evening: filet mignon or golden fried shrimp, two for \$14.95. The buffet special (\$6.95 for all you can eat) is baron of beef and chicken breast. Go ahead — make your reservations (265-6791).

BEST SHOT SUNDAY — It's brunch time again on Sunday, Oct. 4. After the delightful brunch (served from 10 a.m. to 1 p.m.), you can enjoy the tea-dance music of the Best Shot Band from 1 to 4 p.m. Brunch is all-you-can-eat for \$6.95 (\$7.95 for members' guests), \$2.50 for children 4-12, and free for the little 'uns 3 and under. Reservations are required — call 265-6791 now.

OKTOBERFEST — Ja, Oktober ist hier, and at the Club that means "Die Polka Schlingels," "Schuhplattler Dancers," and wienerschnitzel all next Freitag (excuse us, Friday) evening, Oct. 9. From 6 to 9 p.m., the choices are wienerschnitzel (\$7.95), knockwurst or bratwurst plate (\$6.95), or the buffet (\$7.95), tonight featuring sauerbraten and schweineschlegel. Die Polka

Schlingels, a German oompah band, plays polka tunes from 7 to 11 p.m. From 8 to 8:30 p.m., Rudy's Schuhplattler Dancers will entertain with Austrian and German folk dances. This could be a sellout, so call 265-6791 for reservations!

C-CLUB THUNDERBIRDS — For retirees, the Coronado Thunderbirds group is really something special — it's the special interest group for retirees who are Club members. The T-birds have classes, monthly meetings, and seminars about issues that particularly interest retirees. Within the Thunderbird organization is the Card Shark group that meets every other Thursday to play cards and the Roadrunner RV group that travels and socializes in various camping areas. Interested in hearing more? Call Barney Barnett (293-8040), Art Hasenkamp (255-8946), or Bob Butler (299-5626).

SPEAKING OF T-BIRDS -Roadrunners will travel to Santa Rosa State Park (north of Santa Rosa, N.M.) Oct. 19-22. For info, call President Tex Vandi on 293-1249 or Wagonmaster John Smelser on 256-3108. And the Card Sharks' next few dates are Oct. 15, Oct. 29, Nov. 12, Nov. 19, Dec. 3, and Dec. 17, says fairdealin' cardmaster Jim McCutcheon.

Take Note

New Mexico Volunteers for the Outdoors is looking for volunteers for the Water Canyon Project on Saturday and Sunday, Oct. 17 and 18. Water Canyon is about halfway between Socorro and Magdelena just off US Highway 60. The project involves trail maintenance and clearing, water bar construction, and trail signing. For information, callproject leader Pete Barbatsuly on 293-3908.

Volunteers are also needed for the Pino Trail Project, Sandia Mountain, Saturday, Oct. 3; contact project leader Sally Porter on 298-5197.

The public can tour five private Albuquerque gardens, all uniquely influenced by Japanese culture, on Sunday, Oct. 4. Tour hours are from 10 a.m. to 4 p.m. Participants may begin at any one of the five locations and visit at their leisure. Tickets may be purchased for \$10 each at the Albuquerque Garden Center (10120 Lomas NE). This event is sponsored by the Albuquerque Chapter of Ikebana International, a non-profit organization that studies and promotes Japanese floral design and related cultural arts. For information, contact Virginia Alonso at the Garden Center on 296-6020.

Sympathy

To Estie (9500) and Clint (333) Shirley on the death of her father and his father-in-law in Albuquerque, Aug. 15.

Events Calendar

Oct. 6 — "Marcel Marceau — Parade of Stars," farewell tour of the unforgettable master of mime; 8:15 p.m., Popejoy Hall, 277-3121.

Oct. 9-10 - Classics Series: New Mexico Symphony Orchestra with guest violinist James Buswell, music features Copland's "El Salon Mexico," St. Saens' "Violin Concerto No. 3," Godfrey's "Mestengo," and Respighi's "Pines of Rome"; 8:15 p.m., Popejoy Hall, 842-8565.

Oct. 9-11 — "Mrs. Warren's Profession" by George Bernard Shaw, controversial play about options available to women who make their own way in the world in turn-of-the-century England; 8 p.m. Fri. & Sat., 6 p.m. Sun.; Vortex Theatre, 247-8600.

Oct. 10 — "Ophelia," playwright Jeff Wanshel rewrites Shakespeare's Hamlet to spotlight Ophelia in this presentation where you "see and hear every word"; 8 p.m., KiMo Theatre, 768-5188.

Oct. 11 - Wind Symphony Concert, conducted by Greg Clemmons; 3 p.m., Keller Hall, 277-2127.

Oct. 12-18 — Storyfiesta: week-long storytelling with panels, workshops, traditional and revivalist storytellers, presented by Storytellers International; call for times, Indian Pueblo Cultural Center, 897-0713.

Oct. 13 — People of the Southwest Lecture Series: "Navajo Archaeology and History," by author Dave Brugge; 7:30 p.m., Maxwell Museum of Anthropology Lecture Hall 163, 277-4405.

Oct. 13-14 — Symposium: Roses, Violets, Creative Design, classes in horticulture and design; 8 a.m.-4 p.m., Albuquerque Garden Center (10120 Lomas NE), 296-

Oct. 15 — Chile Ristra Workshop, traditional holiday decoration class; 7-9:30 p.m., Albuquerque Garden Center (10120 Lomas NE), 296-6020.

Oct. 16 — Subscription Concert I: Chamber Orchestra of Albuquerque with guest pianist Nohema Fernández, featuring works by Mozart, Liszt, Turina, and Dvorák; 8:15 p.m., St. John's United Methodist Church (2626 Arizona NE), 881-0844.

Oct. 17 - New Mexico Pageant of Bands, 15 New Mexico high school bands will compete; 9 a.m.-4 p.m., Wilson Stadium (Lomas & Chelwood NE, Manzano High School), 298-7740.



FULFILLING SANDIA'S NEW MISSION — Del Owyoung (right), Manager of Photonics Research Dept. 1312, chats with Ken Meissner (left) of the University of Arizona and Marc Himel of AT&T Bell Labs during the 76th Annual Conference of the Optical Society of America (OSA). The Sandia display illustrated opportunities for technology transfer and Labs-industry partnerships. Del chaired the week-long conference, during which more than 1,000 technical papers were presented. The OSA is an international society with more than 10,000 members.

Events Calendar items are gathered from various sources. Readers should confirm times and dates of interest whenever possible.

Oct. 2-11 — "Hopi Spirits," photographs document kachina doll making; 9 a.m.-4 p.m. Mon.-Fri., 10 a.m.-4 p.m. Sat., noon-4 p.m. Sun.; Maxwell Museum of Anthropology, 277-4404.

Oct. 2-3 & 8-10 — "Come Back to the Five & Dime, Jimmy Dean, Jimmy Dean," presented by the UNM College of Fine Arts Department of Theatre and Dance, story is set in a small-town dime store in West Texas where five middle-aged women, all disciples of James Dean, meet for their 20th reunion; 8 p.m. Thurs.-Sat., Rodey Theatre, 277-4402.

Oct. 2-4 & 9-11 — "Christopher Columbus — The Final Voyage" by Jo Roybal Izay, directed and staged by Victor Izay, insight into the life and times of Columbus, presented by the Podium Players; 8 p.m. Fri. & Sat., 2 p.m. Sun.; Silver Bear (6921 Montgomery NE), 881-6203.

Oct. 3 — Arts and Crafts Fair, Native American artisans, Soutwestern handcrafted items; 9:30 a.m.-4 p.m., Indian Pueblo Cultural Center, 843-7270.

Oct. 3-5 & 9-11 — Rio Grande Arts and Crafts Festival, juried arts and crafts, entertainment, food, art for kids, demonstrations; call for times, I-25 and Paseo del Norte NE, 292-7457.

Oct. 3-11 — Kodak Albuquerque International Balloon Fiesta, more than 600 balloons, weekend sunrise mass ascensions, special shapes rodeo, key grab contests, and more; 7 a.m., Balloon Fiesta Park (I-25 & Alameda NE), 821-1000.

Oct. 4 — "Circa 1492," music from Columbus' time presented by Musica Antigua De Albuquerque; 4 p.m., Central United Methodist Chuch (1615 Copper NE), 842-9613.

Oct. 4 — Concert I: Albuquerque Chamber Soloists perform music by Bach, Villa-Lobos, Debussy, Hindemith, and Brahms, sponsored by UNM Continuing Education and the June Music Festival of Albuquerque; 3 p.m., St. Paul Lutheran Church (1100 Indian School Rd. NE, west of University Blvd.), 888-1842.

Oct. 6 — Hispanic Issues Forum: "19th and 20th Century Social Conflicts in New Mexico," by Tobias Duran, lecture focuses on racial, political, and labor conflicts, the Fair Employment Practices Act, the Civil Rights Act, and patterns that may have occurred through the 100-year period in New Mexico history; 7 p.m., UNM Continuing Education Conference Center (1634 University NE), 277-1176.

Oct. 6 - "Central Rio Grande Bosque -Perspective on Its Functioning," lecture by Prof. Clifford Crawford (UNM Biology Dept.); 1 p.m., Albuquerque Garden Center (10120 Lomas NE), free, 296-6020.